Tye River Community Meeting:
AGENDA

First and foremost, help yourself to ice cream!

1. Welcome
   - Emily Harper, Director, Nelson County Parks and Recreation
2. Background on Tye River Clean Up Plan
   - Nesha McRae, VA Department of Environmental Quality
3. Agricultural Best Management Practices (BMPs)
   - Brian Walton, Thomas Jefferson Soil and Water Conservation District
4. Landowner Experiences with Agricultural BMPs
   - Mike Campbell, Local landowner and farmer
5. Septic System Maintenance
   - Tom Eick, Nelson County Health Department

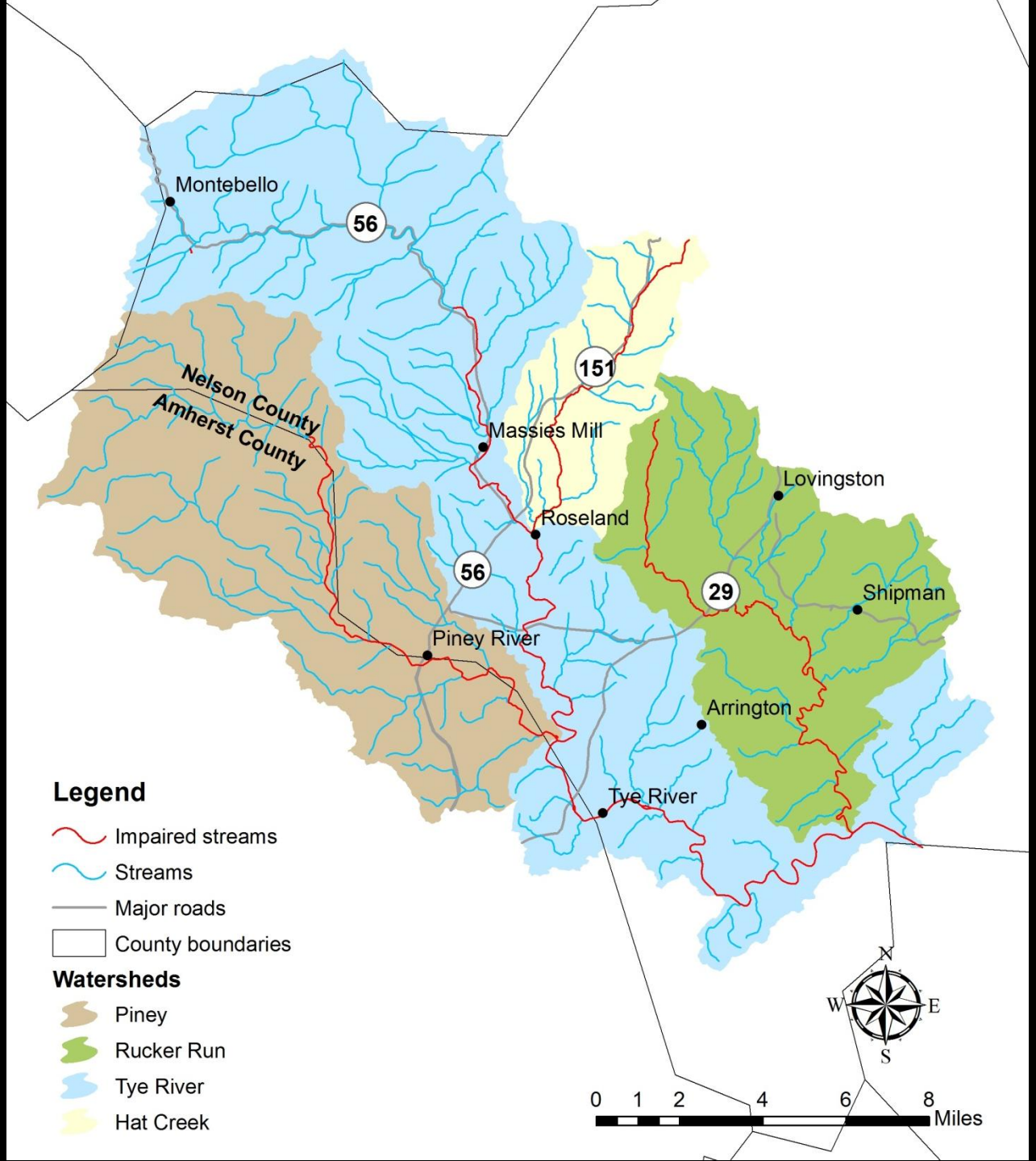
A Plan for Clean Water:

Tye River, Hat Creek, Rucker Run, and Piney River

Nesha McRae
Virginia Department of Environmental Quality
May 15, 2014

Acknowledgements

- Massies Mill Ruritan Hall
- Thomas Jefferson Soil and Water Conservation District
- Chesapeake Bay Foundation
- Saunders Brothers and Dickie Brothers
- Natural Resource Conservation Service
- Nelson County Health Department
- VA Department of Conservation and Recreation
- Working group and steering committee members


Montebello
56
151
Nelson County
Amherst County
Massies Mill
Lovingston
Roseland
56
29
Shipman
Piney River
Arrington
Tye River
Legend
Impaired streams
Streams
Major roads
County boundaries
Watersheds
Piney
Rucker Run
Tye River
Hat Creek
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S
0 1 2 4 6 8
Miles

Why do we need a plan for clean water?

- Too much *E.coli*
  - Human health concern
    - Risk based standard
  - Indicator of pathogens in the water (viruses, protozoans, bacteria)
  - Impacts on livestock
    - >50% of cattle diseases in mid-Atlantic transmitted through fecal oral pathway

Where are we now?

The Planning Process in Tye River

- Study of the watersheds completed in 2013
- Identified sources of bacteria in the watersheds, their contributions and the reductions needed
- Kicked off development of clean up plan in November
- Working group and steering committee meetings over the past 6 months
- Draft plan has been completed, kicking of 30-day public comment period starting tomorrow
- Plan available at: http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs.aspx (select TMDL and follow the links to TMDL Implementation Plans)

Review of the Study:
Where is the bacteria coming from?

- *E. coli* is found in warm blooded animals
  - Humans
  - Wildlife
  - Livestock
  - Pets
- Some bacteria deposited on the land ends up in the creek
- Impact of direct deposition of bacteria in the creek

Failing septic drain field
Photo: Megan O'Gorek, SVSWCD

Bacteria Reductions Needed to Remove Tye River From "Dirty Waters List"

Watershed	% Reduction by Source				
	Livestock DD*	Pasture	Cropland	Straight pipes and failing septic	Wildlife DD*
Tye River	10%	5%	5%	100%	0%
Hat Creek	75%	25%	5%	100%	0%
Rucker Run	65%	25%	5%	100%	0%
Piney River	40%	25%	5%	100%	0%

*DD= Direct deposit

Data from 2013 VA Department of Environmental Quality
Tye River TMDL

What is in the plan?

- Actions to improve water quality (BMPs)
- Outreach strategies
- Costs and benefits
- Funding opportunities
- Project timeline
  - Implementation goals
  - Implementation milestones

Agricultural Best Management Practices:
Pasture and Cropland

BMP	Units	Extent
Improved pasture management	Acres	4,800
Streamside vegetative buffers	Acres	226
Reforestation of erodible pasture	Acres	57
Permanent vegetative cover on critical areas	Acres	126
Livestock exclusion from streams	Miles	56
Small grain cover crops	Acres	223
Continuous no till	Acres	355

Failing Septic Systems and Straight Pipes

BMP	Units	Extent
Septic tank pumpout	Pumpout	454
Septic system repair	Systems	312
Septic system replacement	System	156
Alternative waste treatment system	System	106
Connection to public sewer	Connection	12

Education and Outreach

- Focus on economic benefits of agricultural BMPs
  - Note limited access availability for livestock exclusion
- VCE Master Well Owner Network: Amherst Co., August 2014
- Develop and distribute educational materials at ongoing events
  - Farmers Markets
  - County Fairs

How much is it going to cost?

- Agricultural BMPs: $4M
- Septic system and straight pipe BMPs: $5M
- Technical assistance (1.5 positions, 8 yrs): $720K
- Total estimated cost: $9.1M over 8 years
- Annual cost: $1.1M

How are we going to pay for it?

- USDA Programs - CREP/EQIP
- Water Quality Improvement Fund
- National Fish and Wildlife Foundation Grants
- EPA 319 Funds (available through DEQ)
- State Revolving Loan Funds
- State Cost-Share Program and Tax Credits

Photo: Jeff Vanuga, NRCS

Implementing the plan… what's next?

- Voluntary implementation
- Agricultural BMP implementation through Soil and Water Conservation Districts and Natural Resource Conservation Service
- Pursue grant opportunities for septic BMP programs
  - Rockfish River example
- Citizen monitoring

Photo: DCR Scenic Rivers Report

Why should you participate?

- Economic benefits
  - Agricultural producers
  - Homeowners
  - Local economy
- Water quality benefits
  - Environmental
  - Human health

Photo: DCR Scenic Rivers Report

Public Comment Period

- May 16, 2014 – June 16, 2014
- Send written comments to:

  Nesha McRae

  Virginia Department of Environmental Quality

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